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ABSTRACT

The use of the case study in geography instruction has at least a 100 year history, but sample studies are relatively new. They are widely used in some British Commonwealth countries, but none are published or used in America. Sample studies deal with small regions by presenting maps, photography, charts, graphs, accounts of interviews with residents, and other first hand data. Students are led to interpret these data as geographers. The concrete nature of the materials makes sample studies particularly suited for elementary school students. A bibliography of four categories of sample studies materials is listed in Appendix A. Listed are 10 volumes of inquiry-oriented sample studies; 16 volumes of mixed expository and inquiry-oriented sample studies; 20 volumes of expository sample studies; and, 26 volumes of case studies similar to sample studies materials. All are Canadian and British except for one American volume of case studies. (DJB)

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Gary J. de Leeuw

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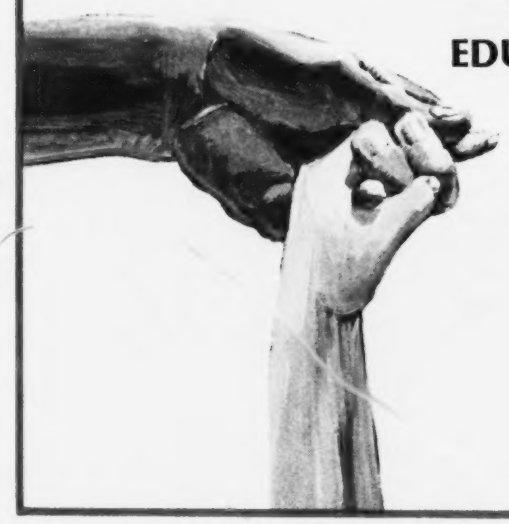

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The Research and Development Center for Teacher Education
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Foreword

Inquiry is a much abused concept these days. It is known in all the teaching fields but principally in science, mathematics and social studies. It burst upon the scene several years ago as one response to several recognized concerns. Inquiry has been justified and touted as a pedagogic means of emphasizing pupils' intellectual processes and the ways of knowing in the disciplines underlying the school subjects. Examination of "inquiry" reveals, nevertheless, that it may well be a current educational slogan. As such, it seems to encompass a multitude of practices and is associated with many (and, at times, quite different) rationales. To understand inquiry as a pedagogic instrument, one must relate meanings about pupil activities and disciplined study to specific materials and procedures.

Gary J. de Leeuw's paper discusses the sample study in the teaching of geography as one inquiry-oriented pedagogic approach. In addition, Mr. de Leeuw brings to the attention of American social studies educators, for the first time for many, an approach long used and long since found useful in geography instruction in schools of the commonwealth nations.

This paper serves several specific functions. It presents the background and rationale of the sample study in geography instruction. It serves, consequently, as the foundation upon which a sample study of a south Texas ranch is being prepared as a Teaching Laboratory module. This sample study will constitute a major dimension for a Research and Development Center research program focused on clinical components in the preparation of elementary school social studies teachers. Hopefully, the paper will inform a wider audience of social studies educators and, also, will motivate preparation and use of sample studies in American schools.

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THE SAMPLE STUDY: AN INQUIRY-ORIENTED, CASE STUDY APPROACH IN GEOGRAPHY TEACHING[1]

Gary J. de Leeuw

Social studies teachers in Canada have recently come to employ widely a technique for teaching geography called the "sample study," seemingly without the knowledge of teachers in the United States. The purpose of this paper is thus to introduce the sample study to American educators. The technique will be defined, related literature reviewed and terms little used in the United States explained.

Definition of Sample Study

In general terms, the sample study is an inquiry-oriented, case study technique for teaching geography of which the following is true: (1) the primary responsibilities of the teacher are to present pupils with materials that depict a small region and to ask questions to stimulate pupil discovery; (2) the essential character of classroom materials is non-expository; (3) the major objectives for teaching are to simulate in the classroom the inquiry processes of a geographic field study, and to provide a framework of concrete experiences for geographic concepts.

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[1]The author is deeply indebted to his teacher and colleague, Professor Evelyn Moore, Department of Curriculum and Instruction, Faculty of Education, University of Calgary. Without her editorial assistance in the preparation of previous papers on the sample study approach as well as manuscripts for sample study materials for use by school children, the ideas contained in this paper would not have been formulated.

In a typical sample study the teacher presents maps, photographs, charts, graphs, accounts of interviews and other geographic source materials that together depict such small cases or micro-regions as mixed farms, ranches, pulp mills, mountain villages or city slum neighborhoods. The teacher questions to help pupils interpret the materials, generate hypotheses and confirm conclusions. A substantive goal may be to help the pupils generalize about human and physical activities in such wider areas represented by the case study as ranching regions and city slums. A major syntactical objective is to teach pupils to inquire into human and physical conditions in the manner of geographers. A general and pervasive purpose is to help pupils develop skills, conceptions and values of geographic inquiry that may be transferred to independent inquiry into varied social problems.

Review of Literature on the Sample Study

Justification for the above definition can be found in the literature of geography education of Great Britain, Canada, Australia and New Zealand. Unfortunately, few published accounts present a clear or complete picture of the sample study as it is currently recommended for teaching in Canada. Accordingly this review of the literature seeks to synthesize the writings of many geography educators in an attempt to construct an authoritative definition.

The earliest definitions of sample study seem more rhetorical or exhortatory than analytical or precise and this is reflected in conflicting applications of the technique. The sample study has been variously presented as a type of textbook, an essentially expository teaching method and an inductive teaching method. Explicit definitions representing an expert's consensus were not published until 20 years after the first published exposition of the sample study and, even recently, materials inconsistent with authoritative definitions have been published under the title of "sample study."

The rationale for the sample study has not always been clear. Conflicting definitions of the nature of geography were sometimes at the root of the confusion. Few empirical studies can be cited in support of fundamental assumptions and few claims for the efficiency of the method have been effectively documented.

Evolution of Definition

The current definition of "sample study" evolved in geography education in countries of the Commonwealth of Nations over a period of more than 30 years. The first statements defined the sample study in terms of classroom materials and geographic content; only recently has it been widely defined as a pedagogical technique.

James Fairgrieve in Britain published the earliest definition. In his presidential address to the British Royal Geographical Society in 1935 he suggested that teachers make use of detailed descriptions of small areas selected as representative of larger regions, and taught as particular, simple and concrete evidence for regional generalizations. He called the descriptions "samples" and cited a study of a small farm in Tuscany as an example. No explicit mention was made of a sample study teaching technique, although this was implicit in a strong recommendation for increased emphasis ". . . . on the activity of the pupil not on the activity of the teacher" (Fairgrieve, 1936).

Equally important in the development of the sample study was Neville Scarfe, a British Geography educator who is currently dean of education at The University of British Columbia in Canada. Scarfe has written numerous articles expounding upon the sample study and has personally influenced many students of geography education in Great Britain and Canada. Scarfe (1942) discussed the "sample" much as did Fairgrieve, adding only that samples should contain abundant, precise and genuine detail. His examples included a farm, a factory and a small settlement. However, the first article written solely to expound the sample study to British teachers was by Hickman (1946). Like Fairgrieve, she defined the sample study chiefly in terms of contents.

Long and Roberson (1956) first defined the sample study as a specific type of teaching method or technique in an article that attracted the attention of geography teachers throughout the British Commonwealth. A clear consensus of geography educators has since expressed support for this position. Graves (1965), Honeybone (1962), Owen (1966), Stimson (1964) and Welsh (1964) have written supportive articles which have also added considerable clarification. They suggest that teachers present non-expository materials, selected to depict the geography of a small unit area and pose structure problems to help pupils make interpretations for themselves. Thus, the teacher is to be actively involved throughout the inquiry process. He carefully sequences presentation of materials; and he questions and probes to force pupils to attend to significant evidence, attempt difficult cognitive tasks, frame explanatory principles or to test conclusions against evidence from many sources. Some exposition is considered necessary, but only to provide background prerequisite to productive interpretation or to aid in the process of generalizing the study by relating it to wider regions. The teacher is advised to order the study in three broad steps: (1) pupils should actively ascertain the precise locations of the sample area, (2) the geographic source materials should be interpreted by the pupils, (3) the sample area should be explicitly and thoroughly related to the region or type it represents. The content for sample studies to be selected is to be broadly representative of the geography of a larger region or widespread type such as dryland farming or transitional urban zones. Samples should therefore be of two basic kinds, regional and type or topical. In addition, either area would need to be small enough to permit detailed study, sufficiently lacking in complexity to be understood by pupils of the age for which it is intended, and sufficiently integrated by interrelationships or sufficiently uniform in important features to be described as a unit.

The materials selected to depict sample areas were generally called sample study source materials. Such materials, these writers state, should be made available commercially in sample study reference books and in kits or portfolios. Teachers could collect materials from geography publications and prepare sources from first-hand study of real places. For use in sample studies, source materials must present evidence, but not conclusions, about geographic conditions. Authentic photography of the area and people under study should be a major source, although a variety of materials -- large- and small-scale maps, diagrams, graphs, statistical tables, accounts of interviews and field notes -- must be included. High priority is given to aerial photographs and topographic maps. As previously indicated, sources could be accompanied by exposition, but only to facilitate accurate pupil interpretation of the raw geographic evidence or data.

Parallels in American Educational Literature

Although American educators apparently have not attempted to teach sample studies *per se*, certain methods and materials used in the United States are closely similar to those used in the sample study.

In the first place, the sample study is clearly a discovery or inquiry-oriented teaching method. Specifically it resembles the teaching techniques described by Massialis and Zevin (1967) as "Analytical Episodes" and Gagne (1966) as "Guided or Structured Discovery." The fundamental attribute of these approaches is teacher ordering of the inquiry process through presentation of tasks and asking of directing, probing and stimulating questions. Examples of structured discovery techniques in geography teaching have been provided in the High School Geography project (1966) and by Massiales (1967).

Secondly, the case study has become a relatively common resource in the libraries of Modern American schools (Allen, 1968). In geography the Kimball Wiles series (1965), a book of case studies by Highsmith (1962) and the High School Geography Project Rural study materials provide case studies of small areas.

However, the sample study seems to differ from techniques used in American education in several significant ways: (1) authentic cases are studied in depth and intimate detail of everyday human adaptation is provided; (2) genuinely "geographic" source materials -- topographic maps, aerial photographs, accounts of interviews -- form an important part of each sample study resource; (3) teachers are provided with detailed suggestions for helping pupils to interpret specific materials; (4) stress is given to distinctively geographic strategies of inquiry.

Evolution of Commercially Prepared Sample Study Materials

Commercially prepared sample study materials have dramatically reflected changing definitions of the sample study. Reference and textbooks advertised as sample studies have been published in quantity for less than 15 years. Fairgrieve (1939-1947) produced the first published sample studies. Clearly a product of his conviction that younger pupils should study authentic detailed geography, his books contained numerous accounts of specific places. The Fairgrieve format was mixed; that is much of the content was expository, but it also included many pictures and charts with questions bearing on these materials. Most of the people studied were hypothetical, that is produced to be representative of average conditions. Thus it is not surprising that few actual people or homes were depicted in photographs and few authentic large-scale maps were included. Fairgrieve's samples then were authentic only to the extent that they were representative, not to the extent that the sample itself existed. In a sense, his book foreshadowed types of simulation.

A text similar in format was published by Forsaith (1951), but it was not until the late 1950's that materials appeared in quantity. By then there was more widespread knowledge of the Fairgrieve and Forsaith books -- articles in geography journals by Hickman (1956) and Long and Roberson (1966); a brief definition in an official teacher's handbook (incorporated A.A.M., 1952), and a

demonstration lesson and exhibition at the Geographical Association Conference of 1956 (Long and Roberson, 1966).

By 1963 more than three-quarters of the sample study volumes now available had been prepared. All were either expository or expository with some inductive sequences. Most of the mixed publications, like Fairgrieve's, seemingly depicted hypothetical sample areas. Some, such as that of Scarfe and Tomkins (1963) slightly increased the ratio of materials such as large photographs, large-scale maps, and questions to exposition. Nearly all studies were short, few exceeding ten pages, the typical volume depicting at least ten sample areas. During the early 1960's as well, all of the wholly expository accounts were published and, interestingly, all covered the sample areas in greater depth than earlier materials and nearly all portrayed real places and people, many in photographs. A few included questions, but always at the conclusion of chapters and not bearing directly on the materials depicting the samples.

Since 1965, 26 sample studies (four volumes) conforming to the consensus definition, as well as 18 mixed studies (six volumes) that have increasingly stressed opportunities for pupil inquiry have appeared, possibly as a result of recent articles by Bramwell (1963), Graves (1965), Honeybone (1962), Naidu (1963), Owen (1966), Scarfe (1959), Stimson (1964) and Welsh (1964) that have publicized and explicated the technique. Further, at least three publishers have advertised what would seem to be authentic sample study source materials in preparation.

Clearly, numerous and varied materials depicting sample areas are now offered commercially. This review has listed 94 volumes containing information for 452 samples. (See Appendix A for a list of commercially available sample studies as of 1969.) Most seem relatively up-to-date; approximately 300 having been prepared since 1958. All inhabited continents, most broad cultural, vegetative and climatic types and many of the world's countries are represented. Significantly, it appears that no full-fledged sample studies are currently published in the United States.

Rationale for the Sample Study

Much has been written in justification of the sample study technique. Most frequently it has been advanced as an efficient means of presenting geographic substance although claims have also been made for its efficacy as an instructional technique per se. In particular, it has been claimed that the sample study is especially suited to teaching strategies of geography inquiry to elementary school children.

A Means of Teaching Geographic Substance. Case studies in geography have been prepared for more than 100 years. In the early nineteenth century, Alexander Von Humbolt, (Hartshorne, 1939), one of the acknowledged fathers of modern scientific geography, published numerous detailed accounts of small places. By the early twentieth century, a French geographer, Jean Brunhes, had initiated the practice of preparing detailed studies as examples of the human geography of wider regions (Whittlesey, 1954). During the 1920's French geographers prepared accounts of even smaller areas. An extreme example, a geography by Andre Allix of a small part of an alpine valley, required 915 pages, with a bibliography of 861 references (Hartshorne, 1959). By the late 1930's many British microgeographies were published. Examples included those by Fogg (1939), Lebon (1935) and Miller (1937).

In the 1920's translations or interpretations in English helped to make American geographers aware of European practices. Probably as a result of the substantial work of Vidal and Brunhes, as well as the methodological discussions of the Germans and Swedes, the publication of American studies became relatively common (Whittlesey, 1954). Among notable examples were those by Whittlesey (1925), James (1932), Finch (1933), Dicken (1935), Platt (1939) and Hartshorne (1934). In particular, Platt's work has received considerable attention as the most scholarly and complete compilation of micro studies available in American geography (Whittlesey, 1954).

But publication of microgeography has not become a major concern of modern geographers. Although British and American journals continued to print many such studies throughout the 1940's and 1950's, and although publication has seemingly increased in recent years (Owen, 1967), the coverage of most regions and types has been uncoordinated, spotty and a relatively small portion of the literature (Brookfield, 1964).

Nevertheless, both geographers and educators have suggested that small area studies can be an important source of knowledge of both regions and types in geography. Brookfield (1964), Brunhes (1947), Hartshorne (1939), James (1934), Mackinder (1943), Platt (1939) and Whittlesey (1954) observed that small area studies are valid geography if they are preceded by survey work and selected to be representative of major characteristics of a region. Hartshorne (1939) has explained, "...the purpose is not to present the area in itself, but to provide an accurate illustration of the representative character of a larger region..." Fairgrieve (1936), Gopsill (1966), Long and Roberson (1966), Moore and Owen (1965) and Welsh (1964) believe that this is the fundamental substantive objective for teaching sample studies.

Finch (1939) and Hartshorne (1939), however, have argued that such a minute area cannot be fully representative of a wider region in any full sense, that complete examples of statistical averages are not found in the real world. It raises the question: If it is not possible to find real people and places fully representative of regions, would it not be better to construct fully representative hypothetical samples? Owen (Moore and Owen, 1965) thinks not. He has suggested that representativeness need not exist on all dimensions.

> . . . it is important to stress that, as far as possible, a unit be representative of a larger region, if the pupil is to generalize about the whole from the details of the unit. Every segment of the earth's surface is, of course, unique, but a sample that is carefully chosen should contain elements that are specific examples of broader regional characteristics . . . It is conceivable that the details of the

> sample will not be comprehensive enough to form a basis for the generalizing process over a wider field; if so, the teacher should either examine another sample or selected source materials, or, alternatively, be a source of information himself to bridge the gap.

Platt has suggested that a second function of detailed studies of small areas is to illustrate a feature of widespread distribution (a type) rather than a single region. In Field Studies in American Geography (1959) he provides examples of microgeographic studies illustrative of types of settlement, agricultural, economic and urban geography. Geography educators have noted this function for samples as well; Honeybone (1962), Owen (1965) and Welsh (1964) noted that detailed studies of such geographical types as tropical plantations, factories, ports, urban growth, river basins or deltas can be used to present evidence of widespread patterns or generalized principles. Studies published for this purpose have commonly been called "type" or "topical" samples (Owen, 1965). Thus, in summary,it is widely held that sample studies have a substantive function: to illustrate the character of both types and regions.

A Means of Teaching the Heuristics of Geographic Inquiry. Several educators have advocated the sample study as a way of simulating geographic field inquiry in the classroom. How this is to be achieved has not been made explicit. Gopsill (1966), Graves (1965), Hickman (1946), Honeybone (1962), Naidu (1963), Owen (1965), Roberson and Long (1950) and Welsh (1964) note only that the sample study technique requires systematic observation, recording and interpretation of evidence contained in such sources as aerial photographs, topographic maps and statistical tables, and that such experiences approximate aspects of field study. They also stress that the teacher must help children to encounter these sources as would a geographer in the field, and, by questioning, guide children through such geographic processes as locating and describing features, determining cause and effect and characterizing.

Even if simulation of field study in the classroom is feasible, the question of the importance of field studies and case studies to modern geography remains. Many geographers continue to stress the teaching of detailed field inquiry as a technique of regional geography, while others emphasize statistical manipulation of systematic or topical data.

Field study and case studies in geography have long been closely associated. Humboldt prepared detailed large-scale studies in search of a more scientific and geographic method. Paul Vidal (Hartshorne, 1939) conducted regional studies of small areas in order to search in the field for environmental laws that would enable geographers to predict the behavior of man "scientifically." More recently, geographers have explicated the relationships between field study and microgeography. Platt (1959) stated that microgeography developed "...as a rational and timely drive against the limitations of armchair compilation from promiscuous data, of subjective impressions from casual travel, and of environmental theory not founded in data."

Brookfield (1964) called for a more important role for microgeography and field study. He claimed:

> Geographers have, in the mass, failed to inquire deeply into patterns of social organization, human behavior and attitudes in their search for explanation . . . The study of process with its concomitant need to inquire into human organization and motivation can only be pursued by selecting very small groups of people, usually occupying only very limited territories. . .: real progress can only be achieved through multiplication of field studies in depth. This is the real meaning of microgeography.

Alternately, some geographers who define geography as a science have suggested that regional studies and narrow non-quantitative field studies do not constitute modern geography. Ackerman (1963) has stated that fundamental research in modern geography "is rarely complete without the verification given in quantified measurement," and that research in geography is not yet at a stage where further regional studies may be considered

fundamental. Wrigly (1965) believes that while modern geographic research continues to use the regional concept as an organizational tool, valid modern studies are no longer "about regions." Further, he has claimed that the major emerging methodological tools are quantitative and statistical. Others, like Kimble (1951), Tudor (1960) and Steel (1961) have attacked the regional concept itself, finding it an unscientific and untenable tool in contemporary geography.

Nevertheless, Broeck (1965), Hartshorne (1939), Linton (1957), Whittlesey(1954) and Woolridge (1950) have classified the regional concept as a fundamental tool in geographic inquiry. Kohn (1963), Linton (1957), Parker (1958-59), Pye (1955), Whittlesey (1954) and Woolridge (1950) have suggested the regional study per se continues to be an important branch of geography because it attempts synthesis or integration of "the totality of human occupance," and this, it is argued, is the ultimate purpose of geography.

Thus, it would appear that the place of regional geography and, by implication, regional sample studies as a means of teaching modern geographic inquiry has been seriously challenged, but not convincingly discredited. This is the position of such educators as Brouillette (1961), Gopsill (1966), Honeybone (1954), Laidig (1966), Long and Roberson (1966) and Pearson (1959). Honeybone has commented: "Regional geography, in my view, is the very heart of geography, the central core, which more than any other feature, gives the subject its unique character."

An Effective Teaching Technique. A second major claim in the literature of the sample study is for its effectiveness as a pedagogical technique. As previously noted, such claims have been based largely upon the experiences of teachers of geography, rather than upon research. Bramwell (1963), Owen (1965), Honeybone (1962) and Stimson (1964) have propounded the sample study as an effective method for the teaching of concepts to learners who lack appropriate underlying concrete experiences. Concepts, they argue, must be based upon varied, direct and meaningful

contact with the real world if they are to be accurate and flexible tools for dealing with reality. Where sufficient first hand experiences are not possible, the next best referents for concepts are source materials that are accurate, detailed, intimate and varied representations of the actual world. Thus the sample study, requiring interpretation of such varied sources depicting representative segments of reality as photographs, analytical drawings, large-scale maps, diagrams and intimate descriptions of everyday life, enables pupils to conceptualize more effectively than more abstract or systematic teaching techniques.

Fairgrieve (1936), Scarfe (1942) and Stimson (1964) also argue that because the sample study provides opportunities for pupils to find evidence and make conclusions for themselves, learning is likely to be more effective. Operational concepts, they have suggested, are more often a product of active search and conclusion-making by each pupil, than of passive receptive learning.

Further, Stimson (1964) has claimed that sample studies enable teachers to effectively teach the reading and interpretation skills used by geographers. The technique, she has suggested, frequently requires pupils to use such skills in order to make interpretations from maps, pictures, charts and verbal materials; and skills are learned best as pupils use them in the performance of interesting and meaningful tasks.

But can such skills be learned by children of all ages? Should this aspect of the sample study be ignored in the elementary school? Carswell (1968), from an extensive review of related literature in map reading and a quantitative study involving more than 400 elementary students, concluded: "A major finding of this research is that learners in grades four, five and six can learn to use large-scale topographic maps effectively." Investigations by Dexheimer (1951), and Long (1953) led these researchers to determine that upper elementary children can read photographs to identify significant features in physical and cultural

landscapes, although physical features were found less readily than cultural. Further, in a recent study with 2,200 pupils of upper elementary and secondary ages, Long (1961) found that children of all ages were better able to discover significant features if their search was guided by specific questions.

A Technique Particularly Suited to the Elementary School. The sample study has also been advanced as a technique uniquely suited for instructing the elementary pupil. Bramwell (1963), Brouillette (1965), Fairgrieve (1939) and Scarfe (1959) have asserted that elementary pupils are interested in, and learn best from, such sources of information provided in the sample study as: (1) realistic illustrations, (2) subject matter analogous to that with which elementary pupils are familiar, and (3) evidence that is particular rather than generalized or abstractly systematized.

Bramwell (1963) has quoted from studies in psychology.

> . . . boys and girls of mental ages below fourteen years normally show no desire at all "for" logical systems. Recent work by Inhelder and Piaget (1958) tends to confirm this and to supply firm foundations for similar views held by Nunn (1908) and Whitehead (1928).

According to Owen (1965), Graves (1965), Long and Roberson (1966) and Stimson (1964), the technique is adjusted to the elementary child, who cannot deal with the size and complexity of larger regions. The sample study, Long and Roberson have stated, "is a method of reducing parts of the world to dimensions which can be comprehended."

A Means of Teaching Citizenship. Some educators have suggested a more inclusive function of sample studies. Bramwell (1963), Graves (1965) and Scarfe (1959) have postulated that sample studies could teach intellectual skills and values of wider social relevance than those employed in other forms of geography inquiry. These writers have stressed opportunities for developing skills in independent inquiry into practical contemporary problems. Bramwell has recommended that children be helped to compare samples with

their home areas. Scarfe has suggested that teachers employ the sample study to teach humanitarianism. Graves has noted the potential of the sample study for developing feelings of empathy toward different and distant peoples, an important aspect of world citizenship.

> International understanding is helped if we feel some sort of sympathy with the foreigner. . . The building up of a feeling of sympathy with such a remote person . . . is more likely to develop if we can be, so to speak, carried into his home, which is what studying a small unit often implies.

Summary of Conclusions in Literature. This review has indicated that the sample study is defined as an inquiry-oriented teaching technique suitable for presenting both the substance and syntax of geography; and is particularly notable as an effective method of teaching geographic attitudes, concepts and skills to elementary students. Apparently the literature is generally lacking in studies of the efficacy of the sample study.

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APPENDIX A: SAMPLE STUDY BIBLIOGRAPHY

FOUR CATEGORIES OF SAMPLE STUDY MATERIALS

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III. A Mixed Farm in Southern Ontario

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II. An Arable and Stock Farm in the Scottish Borders
III. A Sheep-Wheat Farm in New South Wales
IV. A Sugar Cane Farm in North Queensland
V. A Grain Farm on the Portage Plains
VI. An Arable Farm in North Norfolk
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V. The Farming Workbook
VI. The Oil Producer
VII. The Fruit Farmer
VIII. The Wheat Farmer
IX. The Meat Producer
X. The Commercial Fisherman
XI. The Coalminer
XII. The Post Office Worker
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XII. The Story of Liberia
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